

# **COAL DEMAND AND SUPPLY OUTLOOK**

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# **On Coordination of Coal Supply & Demand in China**

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**March 4, 2002**

China became the world's largest coal producer and consumer with a raw coal output exceeding 1 billion tons in 1989. Since then, China's coal output and sales have been in the front rank in the world. Coal is the most important primary energy and industrial chemical material in China. Coordination of supply and demand is not only important in the Chinese coal market, but also in the world, because China's coal output and consumption accounts for over one fourth in the world's coal market respectively.

Since 1990s, coal market in China has undergone a big change from excessive coal supply to a basically even supply to a little insufficient supply. The following is a brief description of my investigations.

## **I. Excessive coal supply from early 1990s to mid and late 1990s**

As we know, three key indexes, which are most sensitive to the coordination of commodity supply and demand, are price, arrearages, and stock on hand.

1. Due to the gradual change of price-fixing system in China in 1990s, the change of price could not correctly reflect the relationship between coal supply and demand before 1996. The average pit-mouth coal price of state-owned key coal mines was reduced 15.7% from 1997 to 1999.

2. Arrearages in state-owned key coal mines increased in 1990s. By the end of 1999, the arrearages reached 33 billion Yuan RMB, which equaled to 4 billion USD.

3. Coal in stock tended to increase. By the end of 1999, the national coal stock on hand reached 180 million tons, and stock on hand in coal mines reaching 85 million tons.

The main reasons for excessive coal supply are as follows:

1. The growth of coal output from small mines was too fast. A great number of small township and village coal mines were set up in the middle and late 1990s. The number of mines increased from about 10,000 in 1980 to 80,000 in 1997. The coal output from small mines increased from 110 million tons in 1980 to 570 million tons in 1997. The increase of national coal output in this period was 750 million tons, while that from small mines was 500 million tons, an annual increase of 32 million tons. Among coal output from three categories of mines, i.e. state-owned key coal mines, local government controlled state-owned coal mines and township and village coal mines, the percentage of coal from township and village coal mines accounted for more than 40%.

2. The slow increase of coal export aggravated the situation of excessive coal supply.

## **II. A basically balanced but locally intense coal supply situation by the end of 1990s and 2001 in China**

In 2001, there appeared a basically balanced but locally intense coal supply in China. We may see it from the following facts:

1. A rise in coal price. The average coal price of state-owned pit-mouth mines increased by 7.5% as compared with that in 2000. The coal price in major coal consuming cities were on the rise generally.

2. A large decrease of coal stock. The national coal stock on hand was

120 million tons by the end of 2001, a decrease of 85 million tons, or 42.5%, as compared with that in 1997. The coal stock in mines reduced by 25 million tons, or 47.4% by the end of 2001, comparing with that in 1997.

3. Decrease of arrearages. Comparing with 2000, the revenue from sales of salable coal in the state-owned key coal mines increased by 13.3 billion RMB in 2001. The arrearages reduced by 14% by the end of 2001, as against that by the end of 2000.

The shift from the excessive coal supply to a basically balanced but locally intense situation is due to the decrease of coal supply in domestic market and the increase of need for coal in both domestic and overseas markets. Decrease of domestic coal supply resulted from the state policy of controlling the national coal production and closing of mines in more than three years, and also from the regulation policy of closing illegal mines or those can not meet the safety standards for the safety purposes implemented in 2001. And the increased demand was due to the need for more coal in the domestic market and great increase of coal export.

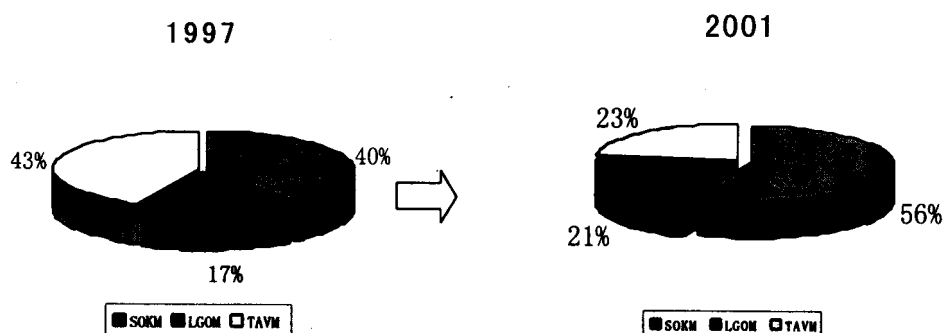
1. To decrease in large quantity coal supply to the market and to continue to implement the policy of controlling the national coal output and closing of mines. In December 1998 the State Counsel issued a circular entitled " Closing illegal and irrationally located coal mines". The general requirement was to control the total coal output and to close mines. It requested to close 25,800 mines and to reduce 250 million tons of coal output by the end of 1999. And the national coal output in 1999 was targeted at 1.1 billion tons. This policy continued in 2000 and 2001.

In 2001, the state implemented a policy of regulating small mines with a purpose to improve mine safety. More than 10,000 small mines were closed. As a result, coal from small mines reduced considerably. The State Council sent out two circulars, one in June and one in September in 2001. It was requested to cease production of the following four kinds of mines for regulation. 1. Small mines within the mining areas of state-owned mines should be closed. 2. All mines without mining license, coal

production license, business license or mine manager certification be closed. All mines, which produced high sulfur and high ash coal, shall be closed. All mines, which do not meet the safety production standards, shall close. Production of small mines would resume until they were examined and accepted. Greatest efforts were made in closing small mines in 2001, and it was a most fruitful year.

From 1998 to 2001, 50,000 small mines were closed in total. The national raw coal output decreased year by year as against that in 1997. The percentage of coal from small in the total national reduced from 43% in 1997 to 23% in 2001, a decrease of 20%. The percentage coal from state-owned key coal mines increased from 40% in 1998 to 56% in 2001.

### Comparison of Percentage of Raw Coal Output in Three Kinds of Coal Mines in China between 2001 and 1997



**Note:** SOKM: state-owned key coal mines

LGOM : local government controlled state-owned coal mines

TAVM : township and village coal mines

2. Steady increase of national economy. Increase of production of coal-consuming industries.

The increase of GDP in 2001 was over 7%. This certainly resulted in increased demand for coal. The production of major coal-consuming industries increased in 2001 as against those in 2000, such as electricity from coal-fired power plant, steel, cement, slab glasses and nitrogen

fertilizer. It was preliminarily estimated that the demand for coal from four major industries, like power, metallurgical, building material and fertilizer industries will increase by about 35 million tons in 2001 as compared with those in 2000.

3. Considerable increase of coal export. In 2001 China exported 85.90 million tons of coal, an increase about 27 millions, or 46% as against that in 2000. China became the 2<sup>nd</sup> largest coal exporter in the world. This resulted from proximity to some Asian coal import countries, the policy of encouraging coal export from the state and improved management of coal export enterprises.

### **III. Coordinated coal supply and demand in the coming years.**

The 10<sup>th</sup> Five-Year-Plan is a very important period in China. GDP will continue to increase by over 7% during this period. So, this will lead to more demand for energy for it has long time been the major primary resources in China.

Coal in China is mainly for domestic market. Coal resources in China can fully satisfy the need for coal in the near future. With structural adjustment of coal mining industry in China, the production capacity of the state-owned large-sized and middle-sized mines will be enhanced. In the near future, the state will put more investment to newly built state-owned key coal mines. At the same time technical transformation will be carried out in the existing mines. As to small mines, after closure of illegal and miss-placed mines and rectification of mine safety, the average scale of small mines will expand. Stability of coal supply will be improved.

Of course, China has already joined WTO, the international coal market regulating factors will become more and more important in coordinating coal supply and demand in the domestic market. In the coming period, China coal market will keep the framework of exporting coal in the northern major coal producing provinces and importing coal to the southern, especially coastal provinces where coal is in shortage..

#### **IV. Conclusions**

1. China is the largest coal producer and consumer in the world. In the recent years the relationship between coal supply and demand in China has changed constantly.
2. From early to mid 1990s, coal supply far surpassed demand in China. This mainly resulted from the rapid growth of coal output from small mines and slow increase of coal export.
3. In 2000, a balanced yet slightly insufficient coal supply appeared in China. This was due to policies for control of production and mine downsizing; policies of improving mine safety in small mines; and policy for encouragement of coal export and increased demand.
4. In the coming period China will keep a trend of constant and steady growth of economy, which in turn, will increase demand for coal. The coal supply capacity will also increase. With China's entry into WTO, China will adjust coal supply and demand in domestic market by making use of coal resources and markets at home and abroad.

*The End*

## **ABSTRACT**

### **Brief Introduction on the Coal Supply & Demand Relations in China**

China has long been the largest coal producer and consumer in the world. From the early to the late 1990s, a severe problem of coal supply far surpassing the demand has popped up. With measures taken for coal mine downsizing and general output control since 2001, China's coal market has basically been balanced, but partially still unstable. Economy is expected to get on a sustainable increase in the coming decades, and this will bring about the increase of the demand for energy and coal. With China entering WTO, coal provision ability of will be enhanced, and the domestic coal supply and coal demand relations shall be balanced through both the international and domestic market.



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- **III: Coordinated coal supply and demand in the coming decades**
- **IV : Conclusions**

# **Preface: The Coordination of Coal Supply & Demand in China is very important**

- Coal is the most important primary energy and industrial chemical material in China. Coordination of supply and demand is not only important in the Chinese coal market, but also in the world, because China's coal output and consumption accounts for over one fourth in the world's coal market respectively.

# **The relationship has undergone big changes**

- Since 1990s, coal market in China has undergone a big change from excessive coal supply to a basically even supply to a little insufficient supply.

# **I. Excessive coal supply from early 1990s to mid and late 1990s**

- **Express:** The three key indexes
  - 1. The average raw coal price at the pit-mouth has been lowed by 15.7% from 1997 to 1999.
  - 2. Payment delayed has been on a increase in 1990s. By the end of 1999, total payment delayed had reached 33 billion Yuan RMB, which equaled to 4 billion USD.
  - 3. Coal storage has been on an increase. By the end of 1999, the national social coal storage had reached 180 million tons, with coal mine storage reaching 85 million tons.

## **The main reasons for excessive coal supply are as follows:**

- 1. The growth of coal output from small mines was too fast. A great number of small township and village coal mines were set up in the middle and late 1990s. The number of mines increased from about 10,000 in 1980 to 80,000 in 1997. The coal output from small mines increased from 110 million tons in 1980 to 570 million tons in 1997. The increase of national coal output in this period was 750 million tons, while that from small mines was 500 million tons, an annual increase of 32 million tons.

Among coal output from three categories of mines, i.e. state-owned key coal mines, local government controlled state-owned coal mines and township and village coal mines, the percentage of coal from township and village coal mines accounted for more than 40%.

2. The slow increase of coal export aggravated the situation of excessive coal supply.

## **II. A basically balanced but locally intense coal supply situation by the end of 1990s and 2001 in China**

- See it from the following facts:
  - 1. A rise in coal price. The average coal price of state-owned pit-mouth mines increased by 7.5% as compared with that in 2000. The coal price in major coal consuming cities were on the rise generally.



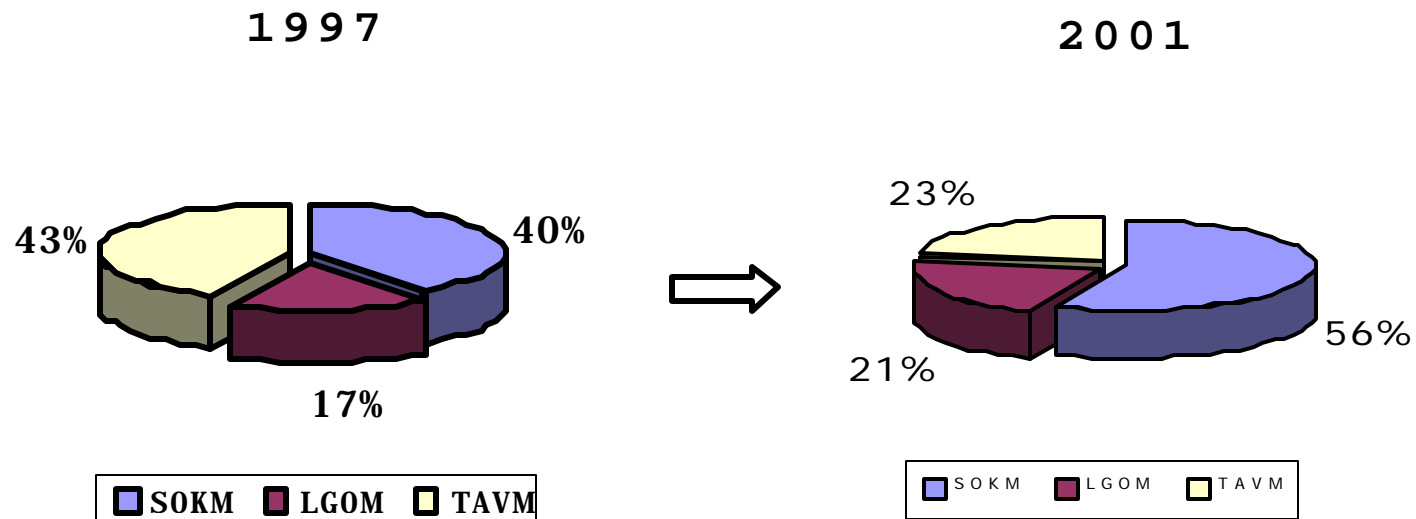
- 2. A large decrease of coal stock. The national coal stock on hand was 120 million tons by the end of 2001, a decrease of 85 million tons, or 42.5%, as compared with that in 1997. The coal stock in mines reduced by 25 million tons, or 47.4% by the end of 2001, comparing with that in 1997.
- 3. Decrease of arrearages. Comparing with 2000, the revenue from sales of salable coal in the state-owned key coal mines increased by 13.3 billion RMB in 2001. The arrearages reduced by 14% by the end of 2001, as against that by the end of 2000.

The shift excessive coal supply to a basically balanced but locally intense situation is due to three factors:

- 1. To decrease in large quantity coal supply to the market and to continue to implement the policy of controlling the national coal output and closing of mines. In December 1998 the State Counsel issued a circular entitled " Closing illegal and irrationally located coal mines". The general requirement was to control the total coal output and to close mines. It requested to close 25,800 mines and to reduce 250 million tons of coal output by the end of 1999. And the national coal output in 1999 was targeted at 1.1 billion tons. This policy continued in 2000 and 2001.

- In 2001, the state implemented a policy of regulating small mines with a purpose to improve mine safety. More than 10,000 small mines were closed. As a result, coal from small mines reduced considerably. The State Council sent out two circulars, one in June and one in September in 2001. It was requested to cease production of the following four kinds of mines for regulation.
- From 1998 to 2001, 50,000 small mines were closed in total. The national raw coal output decreased year by year as against that in 1997.

# Comparison of percentage of raw coal output in three kinds of coal mines in China between 2001 and 1997



- 2. Steady increase of national economy. Increase of production of coal-consuming industries. The increase of GDP in 2001 was over 7%. This certainly resulted in increased demand for coal. The production of major coal-consuming industries increased in 2001 as against those in 2000, such as electricity from coal-fired power plant, steel, cement, slab glasses and nitrogen fertilizer. It was preliminarily estimated that the demand for coal from four major industries, like power, metallurgical, building material and fertilizer industries will increase by about 35 million tons in 2001 as compared with those in 2000..

- 3. Considerable increase of coal export. In 2001 China exported 85.90 million tons of coal, an increase about 27 millions, or 46% as against that in 2000. China became the 2<sup>nd</sup> largest coal exporter in the world. This resulted from proximity to some Asian coal import countries, the policy of encouraging coal export from the state and improved management of coal export enterprises.

### **III . Coordinated coal supply and demand in the coming decades.**

- The 10<sup>th</sup> Five-Year-Plan is a very important period in China. GDP will continue to increase by over 7% during this period. So, this will lead to more demand for energy for it has long time been the major primary resources in China.

- Coal in China is mainly for domestic market. Coal resources in China can fully satisfy the need for coal in the near future. With structural adjustment of coal mining industry in China, the production capacity of the state-owned large-sized and middle-sized mines will be enhanced. In the near future, the state will put more investment to newly built state-owned key coal mines. At the same time technical transformation will be carried out in the existing mines. As to small mines, after closure of illegal and miss-placed mines and rectification of mine safety, the average scale of small mines will expand. Stability of coal supply will be improved.



- China has already joined WTO, the international coal market regulating factors will become more and more important in coordinating coal supply and demand in the domestic market. In the coming period, China coal market will keep the framework of exporting coal in the northern major coal producing provinces and importing coal to the southern, especially coastal provinces where coal is in shortage.

## IV. Conclusions

- 1. China is the largest coal producer and consumer in the world. In the recent years the relationship between coal supply and demand in China has changed constantly.
- 2. From early to mid 1990s, coal supply far surpassed demand in China. This mainly resulted from the rapid growth of coal output from small mines and slow increase of coal export.

- 3. In 2000, a balanced yet slightly insufficient coal supply appeared in China. This was due to policies for control of production and mine downsizing; policies of improving mine safety in small mines; and policy for encouragement of coal export and increased demand.
- 4. In the coming period China will keep a trend of constant and steady growth of economy, which in turn, will increase demand for coal. The coal supply capacity will also increase. With China's entry into WTO, China will adjust coal supply and demand in domestic market by making use of coal resources and markets at home and abroad.